Shiv Vyas

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PROFESSIONAL EXPERIENCE

Technical Architect - IoT Product Line (Consultant for Johnson & Johnson)

Tata Consultancy Services Limited   *Feb 2022 - Present*

Directed **full project lifecycle** of three major projects from Proof of Concept (PoC) to deployment, including architecture design, requirements gathering, Software Development Life Cycle (SDLC), and alignment with business objectives.

  I. Implemented a **GxP-compliant** IoT solution to modernize and integrate 25-year-old **J&J/non-J&J** catheter calibration systems with the internet, enabling **real-time data-driven analytics** and reducing workflow time from **two days to real-time**. Successfully connected **70+** systems within 18 months.

  II. Developed a J&J proprietary **anomaly detection** system for vibration sensors across multiple J&J manufacturing sites. Built an end-to-end pipeline for data gathering, cleaning, analysis, modeling, training and deployment. Utilized **time-series** methodologies (**LSTM**) to achieve **90%** predictive accuracy.

  III. Created an automated video recording system utilizing **computer vision**, enabling **QR code and gesture-triggered** recording with real-time **NLP** speech-to-text subtitles for J&J's Tissue Lab.

- Engineered an IoT-based warehouse solution integrating deep learning models (**object & human detection**) on **embedded edge devices**, enhancing space utilization and streamlining inventory management.
- Built analytics pipelines with Databricks, Spark, and Azure to process over **18M** IoT data points from sources like **Delta Lake, SQL DB, and Blobs** in 6 minutes, for resolving data-gaps.

Engage AI & Florida Institute of Technology

Data Engineering - Research Assistant   *Jun 2021 - Feb 2022 | Melbourne, FL*

- Created a platform to help nations achieve and track United Nations Sustainable Development Goals.
- Scraped and compiled **1.5M**+ socioeconomic data points from United Nations, International Monetary Fund, and World Bank; created a user-friendly UI for efficient data analysis with Python & Firebase.
- Compiled a dataset of **150,000+ Landsat-2** satellite images to model future glacial changes, converting raw data into actionable insights that support the National Science Foundation's global climate policy.

Renesas Electronics Americas

Software Engineering Intern   *May 2020 – Aug 2020 | Palm Bay, FL*

- Facilitated the integration of **two acquisitions** into Renesas's digital ecosystem by conducting **gap analysis**, programming, and **testing** the RORE Platform, cutting processing time by **40%** and training costs by **60%.**
- Consolidated data from Oracle, SAP, and NetSuite using Model N, enhancing enterprise-wide collaboration.

Scudo Systems

Co-Founder   *Jan 2017 – Jul 2019 | Ahmedabad, IND*

- Designed a vehicle security system under **$80**, winning Start-Up India Yatra 2017 among **2,200** competitors.
- Raised **1.2M INR** in funding for product development, retaining 5% equity post-exit in 2019.

SKILLS

- **Programming Languages:** *Python, C, C++, SQL, PySpark, Java, Bash Scripting*
- **Machine Learning & AI:** *Pandas, NumPy, PyTorch, PySpark, Keras, TensorFlow, Scikit-learn, TinyML, OpenCV, CUDA, Polars, Time-Series Modeling, AutoML, Hyperopt, LSTM, CNN , RNN, FFmpeg*
- **Data & Analytics:** *Databricks, Data Factory, Delta Lake, PySpark, SQL DB, ETL/ELT, Data Lake Storage, Matplotlib, Plotly, Streamlit, Pipeline (Cleansing, Wrangling, Visualization, Modeling, Deployment)*
- **Cloud & DevOps:** *Azure, IoT Hub,IoT Edge, Docker, Kubernetes, Git, Linux, Jenkins, Github (CI/CD)*

EDUCATION

M.S. in Computer Science   *Graduated: May 2021 | Melbourne, Florida*
Florida Institute of Technology   *Cumulative GPA: 3.7*

- **Teaching Assistant**: Programming in Python - taught Python programming & Linux to 100+ sophomores.
- **Semi-Automated Grading System** - Developed an automated grading system that reduced grading time by 60% and minimized human error, using Unix, Python, and Bash for server deployment.

B.E. in Computer Engineering   *Graduated: July 2019 | Ahmedabad, India*
Gujarat Technological University   *Cumulative GPA : 3.6*